STATE OF MINNESOTA
ENVIRONMENTAL QUALITY BOARD

In the Matter of the Application of Enbridge Energy Partners, Limited Partnership for a Pipeline Routing Permit and for a Partial Exemption from Pipeline Route Selection Procedures for the Terrace Expansion Project-Phase III Pursuant to Minnesota Rules Chapter 4415	**FINDINGS OF FACT, CONCLUSIONS, AND ORDER** **MEQB DOCKET NO. 01-24-PRP-LAKEHEAD**

The above-captioned matter came before the Minnesota Environmental Quality Board (EQB) at a regularly scheduled meeting thereof pursuant to a proposal by Lakehead Pipe Line Company, Limited Partnership, now known as Enbridge Energy, Limited Partnership, effective September 5, 2001, (hereinafter "Enbridge Energy" or the "Company") to add approximately 97 miles of new 36-inch outside diameter steel pipe primarily in its existing right-of-way and parallel to its existing pipelines in Minnesota in five separate segments (loops) from Clearbrook, Minnesota to Superior, Wisconsin. The six Minnesota counties crossed by the proposed pipeline include Clearwater, Beltrami, Cass, Itasca, St. Louis, and Carlton. The new pipeline will become part of the existing pipeline facility and will be used to transport crude petroleum and other liquid hydrocarbons to other delivery points east of Superior, Wisconsin.

STATEMENT OF ISSUE

Construction of a pipeline designed to be operated at a pressure of more than 275 pounds per square inch and to carry hazardous liquids in Minnesota requires a Pipeline Routing Permit from the Minnesota Environmental Quality Board. Minnesota Statutes ∋ 116I.015 prescribes applicable requirements and assigns authority to designate a route to the EQB. The review procedures are contained in Minnesota Rules Chapter 4415. In this instance, review is taking place under the requirements set forth in Minnesota Rules part 4415.0035 [Partial Exemption from Pipeline Route Selection Procedures].

Based on information in the application, the comments at the public information meetings, written comments received, and other Enbridge Energy documents relating to pipeline construction impacts and mitigation procedures, the MEQB makes the following Findings of Fact and Conclusions.

FINDINGS OF FACT

Background and Procedure

1. On August 3, 2001, the Company filed an application for a pipeline routing permit and for a partial exemption from pipeline route selection procedures for a 36-inch outside diameter steel pipe designed to transport crude petroleum in the Minnesota counties of Clearwater, Beltrami, Cass, Itasca, St. Louis and Carlton (Exhibit 1). Included with the application was additional information in a document titled "Environmental Impact and Restoration Analysis, dated July 26, 2001 (Exhibit 2).

2. EQB staff reviewed the application for compliance with the requirements of Minnesota Rules parts 4415.0115 through 4415.0165 and determined that the application contained all of the necessary information. On September 7, 2001, the MEQB chair accepted the Company's application for a pipeline routing permit and for a partial exemption from pipeline route selection procedures. The Board chair notified the applicant of his decision to accept its application in a letter dated September 7, 2001 (Exhibit 4). The Board chair also notified EQB members and technical representatives of his decision to accept the application in a memorandum dated September 7, 2001 (Exhibit 5).

3. The Company provided published notice of the application acceptance in area newspapers. The published notice also included the EQB's public information meeting schedule for each county. The Company's notice was published the week of September 23, 2001, in the following newspapers:

Newspaper	**County**	**Date Published**
Farmers Independent	Clearwater	September 26, 2001
Gonvick Leader-Record	Clearwater	September 26, 2001
The McIntosh Times	Polk	September 26, 2001
The Pioneer/Advertiser	Beltrami	September 26, 2001
The Cass Lake Times	Cass	September 27, 2001
Grand Rapids Herald-Review	Itasca	September 26, 2001
Duluth News Tribune	St. Louis	September 26, 2001
Cloquet Journal	Carlton	September 29, 2001

The published notice included: 1) a description of the proposed project; 2) a map of the proposed pipeline route; and 3) a clear description of the procedures that must be followed for commenting on the application (Exhibit 8). The published notice meets the requirement of Minnesota Rules part 4415.0035, Subp.2.A.

4. Notice of Application Acceptance and the EQB public information schedule also appeared in the *EQB Monitor,* Volume 25, Number 20, October 1, 2001 (Exhibit 9).

5. Minnesota Rules parts 4415.0035, subp. 2. B. and C, require the applicant to send by certified mail a copy of the accepted application and a clear description of the procedures that must be followed for commenting on the application to the chair or chief executive of any regional development commission, county, incorporated municipality, organized towns, and to affected landowners. The applicant must also send it to state agencies who are not board members but have responsibilities for the proposed pipeline. The applicant shall is also required to send a copy of the accepted application to the Minnesota Historical Society, to the office of each regional development commission of a development region, soil and water conservation district, watershed district, watershed management district, auditor of each county, and to the clerk of each individual township and city, crossed by the proposed pipeline.

6. The Company distributed its accepted application and the Environmental Impact and Restoration Analysis, as required by Minnesota Rules part 4415.0035 Subp. 2. B. and C, on September 21, 2001 (Exhibits 6 and 7). That mailing also included a copy of the EQB Public Information Meeting schedule and the Certificate of Need Hearing Schedule.

7. The EQB held public information meetings in each county crossed by the proposed pipeline, as required by Minnesota Rules part 4415.0035 subp. 4. The information meetings were held as follows:

CITY	**DATE**	**COUNTY**
Bagley	October 16, 2001	Clearwater
Bemidji	October 16, 2001	Beltrami
Cass Lake	October 17, 2001	Cass
Blackberry	October 17, 2001	Itasca
Brookston	October 18, 2001	St. Louis
Cloquet	October 18, 2001	Carlton

8. On July 17, 2001, the Company filed a certificate of need application with the Minnesota Public Utilities Commission (Commission) pursuant to Minnesota Statutes ээ 216B.2421, subd. 2 and 216B.243 (2000). Under the statutes, the Company's proposed pipeline addition is a large energy facility and as such requires a certificate of need prior to construction. On August 7, 2001, the Commission issued its order accepting the application as substantially complete.

9. On December 13, 2001, the Commission issued an order granting the certificate of need for the Company's proposed pipeline and associated facilities.

The Applicant

10. Enbridge Energy, Limited Partnership ("Enbridge Energy" or the "Company") (formerly Lakehead Pipe Line Company, Limited Partnership) is a publicly traded master limited partnership that owns the U.S. portion of the world's longest (3,300 miles) liquid petroleum pipeline. The Company operates an interstate common carrier crude petroleum and natural gas liquids pipeline system in the states of North Dakota, Minnesota, Wisconsin, Michigan, Illinois, Indiana and New York. As a common carrier, the Company's customers are shippers of hydrocarbons. These shippers desire to contract with the Company for transport of their commodities to various refineries or other destinations either owned by them or third parties.

11. The Company's pipeline system spans approximately 1,750 miles in the United States, from the Manitoba border near Neche, North Dakota, to the Ontario border near Marysville, Michigan. The Company's pipeline system transports approximately two-thirds of all crude petroleum and natural gas liquids produced in western Canada. In 2000, the Company's pipeline system had available capacity of over 1.7 million barrels per day and delivered on average 1.338 million barrels per day. A barrel of crude oil holds 42 gallons. Substantially all of the crude petroleum and natural gas liquids transported by the Company are delivered to markets in the United States and eastern Canada. The Enbridge Energy pipeline system serves all of the major refinery centers in the Great Lakes region of the United States, as well as the Province of Ontario.

12. In 2000, the Company delivered approximately 80 percent of the crude oil refined in the Minneapolis-St. Paul area, 50 percent in the Chicago area, nearly 100 percent in Wisconsin and approximately 55 percent of all deliveries of crude oil to Ontario and to Buffalo, New York. In Minnesota, Enbridge Energy delivers approximately 350,000 barrels per day, through an interconnection at Clearbrook, Minnesota, to Minnesota Pipeline, a subsidiary of Koch Industries, for transportation to the Marathon-Ashland and Koch refineries in the east metro area.

13. The Enbridge Energy pipeline system consists of approximately 3,300 miles of pipe with diameters ranging from 12 to 48 inches in diameter, 80 pump stations with a total of 677,000 installed horsepower, and 58 storage tanks with a capacity of approximately 10 million barrels of crude oil. It takes almost 14 million barrels of liquid petroleum to fill the pipeline.

The Project

14. The Minnesota portions of the Company's proposed "Terrace Expansion Project-Phase III" which complements similar expansions of the Enbridge Pipeline Inc in Canada is comprised of five separate Asegments≅ or Aloops≅ totaling approximately 97 miles of 36-inch (outside diameter) pipe. The pipeline will be buried underground, primarily within the Company's multiple line easements in the counties of Clearwater, Beltrami, Cass, Itasca, St. Louis and Carlton. Easements on a few parcels will need to be widened.

The first pipeline segment will be installed starting at Clearbrook in Clearwater County and ending south of Bemidji in Beltrami County. The second loop will begin south of Cass Lake in Cass County and terminate near Bena, which is on the south side of Lake Winnibigoshish, and north of Leech Lake parallel to State Highway 2. The third loop starts in Itasca County near Deer River, and generally parallels State Highway 2, passing north of Grand Rapids and terminating near Blackberry southeast of Grand Rapids. The fourth loop begins near Floodwood in St. Louis County, parallel to Highway 2, and terminates on the west side of the Fond Du Lac Indian Reservation. The fifth loop in Minnesota begins southeast of Carlton in Carlton County and proceeds northeast into Wisconsin and terminates on the east side of Superior at the Lakehead Pipeline Terminal. The table below shows the length of each loop by county.

Loop	**County**	**Length (Miles)**
Clearbrook Loop	Clearwater	11.9
	Beltrami	18.8
Cass Lake Loop	Cass	20.2
Deer River Loop	Itasca	25.0
Floodwood Loop	St. Louis	15.7
Wrenshall Loop	Carlton	5.0
MN Subtotal		96.6
Wrenshall Loop	Douglas	13.2
WI Subtotal		13.2
Project Total		109.6

15. These loops will connect existing 48-inch diameter pipeline segments, resulting in one continuous pipeline from Clearbrook, Minnesota to Superior, Wisconsin. The estimated cost of the proposed new 36-inch outside diameter pipeline segments and two pump stations is approximately $126 million dollars. The Company plans to commence construction in 2002 with most work finishing in 2002 The remaining work will finish early in 2003 in order to have the pipeline in service by June 2003.

16. A net capacity increase to the pipeline system of approximately 147,800 barrels per day is expected on an annual average. This capacity increase will result in an annual capacity on the pipeline system of approximately 1,987,500-BPD. In determining pipeline capacity, consideration must be given to seasonal and batch cycle demands which result in a varied ability for a pipeline to transport liquids. Factors such as scheduled and unscheduled maintenance, equipment repair, receipt and delivery restrictions and crude oil availability affect capacity. The system's operating configuration is also simplified with expansion, as crossover piping between varying pipe diameter is not required.

17. The proposed 36-inch pipeline segments will be buried primarily within or adjacent to the Company's existing right-of-way, (which is approximately 125 feet in width) and parallel to three existing pipelines on the Company's multiple lines right easements. Those areas not within the Company's existing right-of-way will be obtained through negotiations with landowners by permanent easement. In most cases, the proposed 36-inch pipe will

be located approximately 20 feet from the centerline of the closest existing pipeline on the right-of-way. Existing facilities within this right-of-way consist of approximately 97 miles of 18-inch, 36-inch and 34-inch pipelines with associated valves; 2 pump station locations (company owned land) with associated facilities including electrically driven centrifugal pumps; and valves ranging in size from 12-inch to 48-inch and cross-over piping between different diameters of mainline pipe.

Proposed Facility Description

18. The facilities proposed by Lakehead specify 36-inch (outside diameter) steel pipe and related materials that include valves, flanges, pipe fittings, coating and wrapping materials, casing, pipe supports, caution signs for crossings and other miscellaneous materials.

19. The 36-inch pipe will have a nominal pipe wall thickness of 0.354-inches. The type of pipe used will be American Petroleum Institute 5L X-70 Double Submerged-Arc Welded. The design pressure of the proposed pipeline is 991 pounds per square inch. The Company's proposed maximum actual operating pressure will be 990 pounds per square inch.

20. In addition to the 36-inch pipeline, the applicant proposes to install 36-inch mainline gate valves with remotely controlled electric motor operators. These valves will be on both sides of river crossings that are more than 100 feet wide in accordance with the U.S. Department of Transportation Safety Regulations, Title 49, Code of Federal Regulations, Part 195.260E, and at appropriate sectionalizing locations in accordance with U.S. Department of Transportation requirements.

21. Cathodic protection will be provided on the pipeline to stop galvanic corrosion and will comply with all requirements of the U.S. Department of Transportation Pipeline Safety Regulations, 49 CFR Part 195. As part of the cathodic protection system, rectifiers and anode ground beds are located along side the right-of-way at numerous locations.

Land Requirements

22. The proposed 97 miles of 36-inch pipeline will be installed on and/or adjacent to the existing right-of-way. In certain areas and on public lands the Company will need to acquire widened right-of-way permits or easements to accommodate encroachment or natural features. For example, on national forest and county lands the company is requesting an additional 20 feet of permanent right of-way adjacent to the existing right-of-way. This will result in minimal additional permanent right-of-way encompassing approximately 72 acres.

23. The Company proposes to obtain, from landowners, temporary right-of-way averaging 70 feet in width to facilitate construction. Based on approximately 75 miles, this will impact approximately 823 acres. Temporary right-of-way or workspace will revert to landowners

upon completion of construction. Additional temporary workspace adjacent to the construction right-of-way may be necessary during construction in areas such as steep slopes and staging areas for stream, wetland, and road crossings, for safety reasons, to provide an area for prefabrication of sections of pipeline, or storage of spoil materials. The Company will acquire additional workspace from the landowner where necessary; however in all cases, the size of extra workspace will be kept to the minimum required to safely conduct the work.

Trench and Depth of Cover Requirements

24. In accordance with federal requirements (49 CFR 195.248), the depth of cover between the top of the pipe and the ground level, road bed or river bottom is typically 36 inches. In accordance with federal requirements (49 CFR 195.248), the depth of cover between the top of the pipe and the ground level, road bed or river bottom is typically 36 inches.

25. Minnesota Statutes ∋ 116I.06, subd. 1 (2000), requires pipelines to be buried with a minimum level cover of not less than 54 inches, in all areas where the pipeline crosses the right-way of any public drainage facility or any county, town or municipal street or highway and where the pipeline crosses cultivated agricultural land. As provided by Minnesota Statutes ∋ 116I.06, subd. 2, the landowner may waive the depth of cover requirements. Any political subdivision authorized by law to approve the use of the right-of-way of any public drainage facility or any public street or highway for a pipeline may waive the minimum depth of cover requirement or adopt and enforce by resolution or ordinance rules or regulations establishing a greater depth than the minimum required and other measures for protection of public roads and drainage facilities under its jurisdiction. The Company will ask each individual landowner to sign a waiver of the 54-inch depth requirement. If landowners do not grant the waiver, the pipeline will be buried 54 inches deep in accordance with state requirements.

26. The trench in which the pipe is placed will have a minimum depth of 72 inches or more, to allow for a minimum of 36 inches of ground cover to the top of the pipe. The trench will have a minimum width of 52 inches or more. The top and bottom widths are determined by soil conditions. In sandy soils, a wider trench will be necessary for sidewall stability. The trench required for the proposed pipeline will result in a minimum excavation volume of 493,000 cubic yards of soil.

Pipeline Safety

27. Congressional concern over the risks of death, injury and property damage from pipeline failure resulted in the enactment of legislation in 1968 and 1979 to regulate the pipeline transportation of gases (i.e., natural gas, flammable gas, or gas that is toxic or corrosive) and hazardous liquids (i.e., petroleum, petroleum products and anhydrous ammonia). The U.S. Department of Transportation is responsible for establishing and enforcing safety standards for both interstate and intrastate pipeline operators. As a result, the Department of Transportation is responsible for (1) enforcing the standards for interstate operators

and those intrastate operators in states that do not assume responsibility for enforcement and (2) monitoring the participating states to ensure that they are adequately enforcing the federal safety standards. The U.S. Department of Transportation Safety Regulations, Title 49, C.F.R., Part 195, prescribe minimum federal safety standards for transportation of hazardous liquids by pipelines.

28. Pipeline safety is a matter of paramount concern to all interested parties. The Company, as noted in its application and these findings, is subject to the U.S. Department of Transportation, Pipeline Safety Regulations (Title 49, C.F.R., Part 195).

29. The Minnesota Office of Pipeline Safety is responsible for enforcement of the pipeline safety regulations. The Office of Pipeline Safety intends to monitor construction of the proposed pipeline for compliance with the regulations. The Office of Pipeline Safety also has an ongoing responsibility for monitoring the Company's facilities for compliance with the safety regulations.

EQB Public Information Meetings

30. As noted in Finding 7, the EQB held six public information meetings, one in each county, to receive public comment on the Company's application. EQB staff presented an overview of the requirements for a pipeline routing permit and for a partial exemption from pipeline route selection procedures. The EQB staff and the Company's representatives responded to questions and comments raised by affected landowners and other interested persons. A total of thirty-five persons attended the EQB public information meetings (Exhibit 10).

31. Questions and comments addressed the location of the pipeline, separation of topsoil and subsoil, soil settling, ditches, damages for crop losses, fencing, the construction process, clearing of vegetation, tree removal, payment for timber, construction schedule, wetland crossings, road repair, driveway access and proximity of pipeline to Shallow Lake and what would happen in the case of a leak. EQB staff and representatives from the Company responded to questions.

Comment Period

32. The EQB comment period for the Company's application ended on November 23, 2001. Minnesota Rules part 4415.0035 requires persons submitting written comments on the partial exemption to state reasons why the Board should grant or deny the partial exemption. One comment letter was received on the Company's proposed Terrace Expansion Project-Phase III.

Comment Letter

33. Minnesota Department of Natural Resources, Rebecca Wooden - Letter dated November 23, 2001 (Exhibit 11).

The Minnesota Department of Natural Resources commented as follows:

DNR staff generally endorses the use of existing right-of-way, and consequently recommends in favor of the partial exemption from route selection procedures. As we have discussed, the DNR has extensive regulatory authority over this project, including licenses for all crossings of public waters, public waters wetlands, and any state-owned land. Our staff has been working closely with the applicant to develop license conditions to minimize impacts to natural resources at these crossings.

We anticipate requiring winter construction where the route crosses public water wetlands. It has been our experience that impacts are substantially lessened when trenching is completed while the ground is frozen. Where the route crosses wetlands not subject to DNR control, we recommend the EQB require winter construction to the extent possible as a condition of the Routing Permit.

Permit language that addresses this DNR concern has been included in the pipeline routing permit.

CRITERIA FOR PARTIAL EXEMPTION FROM PIPELINE ROUTE SELECTION PROCEDURES [MINNESOTA RULES, PART 4415.0040]

34. In determining whether to grant or deny a partial exemption from pipeline route selection procedures, the EQB must adhere to the requirements of Minnesota Rules part. 4415.0040 [Criteria for Partial Exemption from Pipeline Route Selection Procedures]. This part contains the standards and criteria that the Board must address in determining whether to grant or deny the partial exemption.

35. Minnesota Rules part 4415.0040, subp. 2, [Standard], requires the Board to determine that the proposed pipeline will not have a significant impact on humans or the environment. It also requires the Board to evaluate the impact that may be reasonably expected to occur from the proposed pipeline and associated facilities.

36. The following findings discuss the specific impacts of the proposed pipeline on humans and the environment in relation to the criteria (Minnesota Rules part. 4415.0040, subd. 3. A- J.) that the Board must consider.

The assessment of anticipated impacts as they relate to the criteria was performed by analyzing individual components of natural and cultural systems that exist within the area that will be impacted by construction. These components are presented in terms of effects of the proposed pipeline and the procedures for mitigation of any adverse effects through compliance with the Company's Construction Specifications (Exhibit 12), statements made in the Company's application (Exhibit 1), Environmental Impact and Restoration Supplement (Exhibit 2), other exhibits, the terms and conditions of the pipeline routing permit required by Minnesota Rules part 4415.0195, and other applicable regulatory requirements.

37. **Criterion A. Impact on human settlement, existence and density of populated areas, existing and planned future land use, and management plans.**

37a. Low population densities and large areas of undeveloped land characterize the six northern Minnesota counties (Clearwater, Beltrami, Cass, Itasca, St. Louis and Carlton) crossed by the proposed project. Population density (an indicator of extent of development) ranges from 8.3 people per square mile in Clearwater County to 35.4 people per square mile in Carlton Counties. The average population density in the project area is 19.9 people per square mile.

There are approximately 18 cities/towns and 18 townships located within approximately one mile of the proposed pipeline route in Minnesota. Bemidji, Grand Rapids, and Cloquet are the largest populated communities within the project area, with 2000 populations of 11,197, 7,764, and 11,201 respectively. The majority of the communities within the project area have populations of less than 1,000 persons. Communities that will actually be crossed by the project include Leonard (population 29), Wilton (population 186), Bemidji (population 11,197), Cass Lake (population 860), and Cohasset (population 2,481) (Minnesota Planning Web-site).

There are limited residential areas located along the pipeline route. Approximately 260 residences are located within 500 feet of the pipeline. Many of these residences and most of the residential land are located along the Cass Lake Loop pipeline route in the city of Cass Lake.

The project will cross 97 roads, including Federal, state, county, city/township, forest, and private roads. Three of these roads (i.e., U.S. Highway 2, County Highway 7, MN Highway 38) are Federally or state-designated scenic highways. The project will also cross 5 railroads and 2 old railroad grades.

37b. The project crosses six counties (Clearwater, Beltrami, Cass, Itasca, St. Louis and Carlton) and will temporarily affect approximately 1,180 acres of land in Minnesota. Total land area affected by construction and operation of the pipeline in Minnesota is summarized by land use categories in the following table:

LAND USE	LAND AREA AFFECTED BY CONSTRUCTION[1] (ACRES)	LAND AREA AFFECTED BY OPERATIONS[2] (ACRES)
Open Land	371.8	52.6
Forest Land	592.8	148.7
Agricultural Land	147.5	26.7
Residential Land	19.0	3.2
Commercial/Industrial Land	11.4	1.9
Open Water	5.9	1.2
Total	1,184.4	234.3

1 Based on 100-foot-wide construction right-of-way and extra workspace areas outside of this right-of-way
2 Based on 20-foot-wide permanent right-of-way.

The predominant land use types affected by the project are open land and forestland. Open land consists of non-forested uplands and wetlands, including pasture; old fields; scrub-shrub, emergent, and open riparian wetlands; and the portion of the construction right-of-way in forestland that overlaps the existing maintained right-of-way. Forestland consists of both upland and wetland forests and woodlots.

Approximately 372 acres of open land will be temporarily disturbed during grading, trenching, backfilling and restoration. A portion of this disturbed open land will be located within the existing maintained right-of-way. After final construction clean up, the open land in upland areas will be reseeded and mulched. The non-forested wetlands will be seeded with an annual cover crop and allowed to revegetate naturally.

Approximately 593 acres of forestland will be temporarily disturbed during construction of the Minnesota portion of the project. Approximately 149 acres of forest will be permanently converted to shrub and herbaceous cover types as the result of routine maintenance practices along the new pipeline. The 444 acres of trees temporarily cleared from the construction right-of-way and extra workspaces will eventually grow back and redevelop forest communities. The Company will compensate landowners at fair market value for merchantable timber removed during construction of the pipeline.

Approximately 148 acres of agricultural land will be temporarily disturbed during construction of the Minnesota portion of the project. Most of this agricultural land is located along the Clearbrook and Wrenshall Loops. Construction activities will temporarily utilize active cropland within construction work areas. Construction activities may also interfere with planting or harvesting, depending on the construction season. After construction is completed, agricultural activities will be allowed to resume in the pipeline corridor. Landowners will be compensated for crop losses and other damages caused by construction activities.

37c. Future development along the pipeline right-of-way is regulated by ordinance established pursuant to the requirements of Minnesota Statutes ə 299J.05 [Pipeline Setback Ordinance] (2000). This ordinance requires that no development occur within the right-of-way. The proposed pipeline alignment is not in conflict with any existing or planned residential, commercial or industrial development in the area.

37d. The proposed pipeline will not adversely affect population patterns or the density of future development. The proposed pipeline and associated facilities will not significantly affect Criterion A.

38. **Criterion B. Impact on the natural environment, public and designated lands, including but not limited to natural areas, wildlife habitat, water, and recreational lands.**

38a. A total of 36 waterbodies crossed by the project were identified in Minnesota, of these waterbodies crossed, 23 are designated as Minnesota Protected Waters. Four of these Protected Waters are lakes and the others are streams, rivers, and ditches. In addition, the project crosses one wetland identified as a Protected Water. The majority of the waterbodies crossed by the project support warmwater fisheries; however, two are designated as trout streams (Clearwater River and an associated tributary). Five waterbodies are identified as intermittent streams on the USGS topographic maps and three are public drainage ditches.

Two large rivers are crossed by the project: the Mississippi River in Beltrami County and the Prairie River in Itasca County. Both of these rivers are greater than 100-feet wide at the crossing location.

Wetlands along the proposed pipeline corridor were field located during the summer of 2000 and 2001. Wetlands were identified and mapped in general accordance with the Routine Determination Method as specified in the *Corps of Engineers Wetland Delineation Manual* (United States Army Corps of Engineers, 1987). A total of 343 wetlands were identified within a 200-foot-wide survey corridor along the pipeline route. Of these 343 wetlands, 169 wetlands are crossed by the centerline of the proposed pipeline in Minnesota.

A total of approximately 28 lineal miles of wetlands will be crossed by the project in Minnesota. Most of these wetlands are located in the Deer River and Floodwood loops (approximately 11.7 and 6.5 miles of wetland, respectively). The Clearbrook and Cass Lake loops each cross approximately 4 and 5.4 miles of wetland, respectively. Predominant wetland types crossed by the project are emergent and forested wetlands.

38b. All of the waterbodies except the Mississippi River, the Prairie River, and possibly the two designated trout streams (Clearwater River and associated

tributary and the Cass Lake Channel will be crossed using conventional open-cut methods. Dependent upon engineering evaluations, the Company anticipates using the directional drill method to cross the Mississippi River, Prairie River, and possibly the Clearwater River and tributary and Cass Lake Channel. This involves boring under the river to install the pipe. Directional drilling also requires additional work space on each side of the stream crossing for staging areas. The other rivers and streams will be crossed using an open-cut method. In an open-cut crossing, backhoes (or for large rivers, drag lines or clam-shell buckets, excavate a trench in the stream channel, leaving "hard plugs" of soil in place on each bank of the crossing. When the trench has been excavated and the crossing section welded up, the hard plugs are removed and the pipe segment is moved into place. The newly installed pipeline is welded in place, and the trench is back filled with native materials, or as directed by the applicable permits or license. The Company will also be required to minimize the impact of equipment and vehicles on streams and stream banks during construction of the crossings.

38c. Most of the waterbodies crossed by the project contain warm water fisheries. The Clearbrook Loop crosses the Clearwater River and a tributary to the Clearwater River at locations designated as trout waters. Game fish species that may occur in the major river and stream crossings in the project area include: northern pike, muskellunge, walleye, sauger, yellow perch, largemouth bass, smallmouth bass, crappie, bluegill, channel catfish, and sunfish. Other non-game and forage fish species may include carp, bullhead, suckers, sculpin, burbot, redhorse, and minnows.

38d. During trenching, the water quality of inundated wetlands will be temporarily affected due to the suspension of sediments and organic matter. Construction of the proposed pipeline will result in disturbance to some of the existing vegetation within wetlands.

38e. Adverse effects on wetlands are expected to be short-term and minor. Revegetation of most wetland areas disturbed during construction will occur naturally. The long-term operation and maintenance of the pipeline will not have adverse effects on wetland water quality.

Wetland crossings will be conducted according to the Nationwide Permit issued by the Army Corps of Engineers. Construction mats or timbers placed in the wetland to support equipment will be removed after construction is completed. In order to maintain the surface water hydrology within the wetland, preconstruction contours will be restored and no crown will be left over the trench.

38f. The method used for crossing public waters and lands will comply with the requirements of Minnesota Rules Chapter 6135 [Utility Crossing of Public Lands and Waters] and the terms and conditions of the MDNR issued license for water and wetland crossings.

38g. The Company will retain independent third-party environmental inspectors to verify that applicable stream and wetland protection measures identified by the MDNR are implemented during construction of the proposed facilities. The Company will also obtain a storm water discharge permit from the Minnesota Pollution Control Agency. The storm water construction permit identifies best management practices that will be employed by the Company during construction to minimize off-site erosion resulting from surface water run-off.

The Company will be required by the PCA storm water and MDNR permits to take precautions to minimize erosion and the discharge of excavated material into waterways. The Company's construction specifications will also address erosion control.

38h. The proposed pipeline route does not affect any lakes, ponds or other public waters not identified above.

38i. In accordance with MDNR requirements, the Company will also be required to reduce the impact of the pipeline on streams and ditches by restoring and stabilizing the adjacent banks as soon as possible after construction of each crossing.

38j. The operation and maintenance of the pipeline after it is constructed should not impact public lands, lakes, streams, wetlands or other public waters.

38k. If water is encountered during construction, the pipeline will be weighted to prevent flotation. Pipe weighting is normally done with concrete saddle weights or by installing pipe coated with concrete.

38l. Designated recreational areas crossed by the pipeline project in Minnesota include the Mississippi River, the Prairie River, the Chippewa National Forest, three state forests, one state trail, one state game refuge, and four county forests. The pipeline route will not cross or affect any federally designated wildlife refuges, federally designated waterfowl production areas, National Natural Landmarks, or National Scenic Trails in Minnesota.

The Mississippi River is classified as scenic at the proposed crossing location but is not a designated National Wild and Scenic River. The river is also designated a state canoeing and boating route at the proposed crossing location.

The Prairie River is also classified as scenic at the proposed crossing location but is not a designated National Wild and Scenic River. The river is listed on the Nationwide Rivers Inventory as a candidate for National Wild and Scenic or Recreational River.

The Cass Lake Loop will cross approximately 18 miles of the Chippewa National Forest. Approximately 12 miles of land crossed within the Chippewa National Forest is federally owned and managed by the USFS. State forestland and tribal land are also crossed within the proclamation boundary of the National Forest.

The pipeline route will cross approximately 21 miles of designated state forests and approximately 7 miles of state-owned forestland managed by the Minnesota Department of Natural Resources. The state forests consist of the Mississippi Headwaters State Forest, the Bowstring State Forest, and the Fond du Lac State Forest. Most of the state-owned land is located along the Cass Lake Loop.

The pipeline route will also cross approximately 17 miles of county-owned land on the Clearbrook, Deer River and Floodwood Loops.

38m. Because the project will parallel existing pipelines, no new encumbrances or significant impact to recreation land are anticipated. The pipeline project will have only minor and temporary impacts on Federal, state and local recreational areas crossed in Minnesota. There will be no long-term impact to recreational activities within the designated recreational areas as the result of construction and operation of the pipeline.

Construction of the pipeline could temporarily restrict public use of the construction right-of-way and temporarily affect trail accessibility. Potential impacts on recreation activities will be dependent on the timing of construction. Public access to Federal, state and county forestlands will be maintained to the greatest extent possible. Short-term closures of some areas may be necessary during construction due to limited access. Federal and state permits required for crossing the Chippewa National Forest and state-owned forest land will specify mitigative measures for avoiding and minimizing both recreation and environmental impacts.

38. **Criterion C. Impact on lands of historical, archaeological and cultural significance.**

39a. A thorough cultural resources review was conducted in the proposed project area during the planning of the Company's project. This work included a files search and literature review, and development of a model of archaeological sensitivity for the Phase 1 survey of the route. The literature search indicated that there were ten previously identified

archaeological sites and four historic properties within the project area. The literature search document that none of these fourteen cultural resources were evaluated for eligibility on the National Register of Historic Places (NRHP).

Portions of two Native American Reservations are crossed by the project in Minnesota. The Cass Lake Loop crosses the Leech Lake Reservation and the Floodwood Loop crosses the Fond du Lac Reservation. The Company is consulting with resource management staff of both reservations to assess and mitigate potential impacts on tribal land.

39b. The Company will design the pipeline project to have no adverse effects on cultural resources. The Company will consult with the COE, SHPO, and the Native American tribes on measures to avoid or mitigate adverse impacts on significant cultural resources. These measures will include either routing the pipeline around identified archaeological sites or conducting data recovery at the site prior to pipeline construction. The Company will also develop and implement an unanticipated discovery plan in the event that a cultural resource site is found during construction activities.

39c. The Company will follow the recommendations of the State Historic Preservation Office regarding the potential presence of previously unrecorded sites along the proposed route. The pipeline routing permit requires the Company to mark and preserve any archaeological sites found during construction of the pipeline and give notice to the Minnesota Historical Society.

40. **Criterion D. Impact on economies within the route, including agricultural, commercial or industrial, forestry, recreational and mining operations.**

40a. The proposed pipeline will have the most significant impact on the forestry and agricultural economy.

Approximately 593 acres of forestland will be temporarily disturbed during construction of the Minnesota portion of the project. Approximately 149 acres of forest will be permanently converted to shrub and herbaceous cover types as the result of routine maintenance practices along the new pipeline. The 444 acres of land temporarily cleared of trees cleared from the construction right-of-way and extra workspaces will revegetate and develop forest communities.

Short-and long-term impacts will result from the construction of the proposed pipeline route through forested areas. Trees and brush will be removed from the construction right-of-way and temporary workspaces. Overlapping the construction right-of-way with the Company's existing

maintained right-of-way to the greatest extent possible will minimize impacts to forestland. The Company's existing permanent right-of-way is maintained in a herbaceous state to facilitate proper aerial inspection.

Following construction, forested areas located on the new permanent right-of-way will be seeded to promote herbaceous cover types. Consistent with previous practices, the new permanent right-of-way will be maintained in a herbaceous state. Forested areas on the temporary right-of-way and extra workspaces will be restored to allow the re-establishment of forest cover. The rate of forest reestablishment will depend upon the type and age of the vegetation cleared, as well as the natural fertility of the areas affected. It is anticipated that early successional species will begin to colonize the right-of-way within a few years after construction, followed by establishment of later successional species.

40b. Approximately 148 acres of agricultural land will be temporarily disturbed during construction of the Minnesota portion of the project. Most of this agricultural land is located along the Clearbrook and Wrenshall Loops. Construction activities will temporarily utilize active cropland within construction work areas. Construction activities may also interfere with planting or harvesting, depending on the construction season. After construction is completed, agricultural activities will be allowed to resume in the pipeline corridor. Landowners will be compensated for crop losses and other damages caused by construction activities.

40c. The Company is responsible for temporary construction damages to crops, grazing lands, timber, fences, drain tile and underground utilities directly caused by pipeline construction and maintenance. The Company is also responsible for damage to landscaping, driveways or any other physical or functional improvements caused by pipeline construction or maintenance.

40d. The Company has a responsibility to work with the property owners to identify any special problems they may have that are associated with the proposed project.

40e. If any drain tile fields are crossed, the pipeline contractor will repair all drain tiles damaged as a result of pipeline construction. The Company is responsible for correcting all drain tile problems that are the result of pipeline construction.

40f. The cost of the pipeline portion of the Terrace Expansion Project-Phase III in Minnesota is approximately $126 million. During construction of the project, several hundred workers from pipeline contractors, local laborers, equipment contractors, suppliers and regional testing firms will be involved with the project. In addition, environmental and construction inspectors, as well as county inspectors, will all be employed during this

project. During the months of preparation, construction, testing and restoration, these workers will have a significant impact on the local economy.

40g. The Company now pays about $10.9 million dollars (2000 estimated) in property taxes in Minnesota. The total assessed value resulting from this expansion will increase the estimated property taxes by about $4 million in the six counties affected by the expansion. Much of the construction materials and equipment, welding supplies, heavy equipment leases, electrical components and building materials will be supplied from this region. The Minnesota sales-and-use tax generated by this expansion project is expected to be approximately $4.8 million.

41. **Criterion E. Impact on pipeline cost and accessibility.**

41a. Location of the proposed pipeline within or adjacent to existing right-of-way will help minimize the cost of the proposed project.

41b. Access will be provided by the existing roadway system and along the Company's existing pipeline right-of-way. If necessary, temporary access roads will be built, with consent of the affected property owner.

42. **Criterion F. Impact on use of existing rights-of-way and right-of-way sharing or paralleling.**

42a. The proposed 97 miles of new pipeline will be installed on/or adjacent to the right-of-way previously obtained or to be obtained from landowners by permanent easement. The existing right-of-way has an average width of 125 feet.

42b. Construction of the pipeline will generally require a 100-foot-wide construction right-of-way to allow for temporary storage of topsoil and spoil to accommodate safe operation of construction equipment. The spoil side (i.e., topsoil and ditch spoil stockpile area) will typically be 20 feet wide and generally located partially within the existing maintained right-of-way. The working side (i.e., equipment work area and travel lane) will typically be 80 feet wide and generally located outside the existing maintained right-of-way.

During construction, the Company will temporarily use off right-of-way areas for pipe and materials storage. In addition, construction contractors will require off right-of-way areas to park equipment and stage construction activities. At this time those areas have not been identified.

Temporary right-of-way will revert to landowners upon completion of construction

Additional temporary work space adjacent to the construction right-of-way may be necessary during construction in areas such as steep slopes and staging areas for stream, wetland and road crossing, for safety reasons, to provide an area for prefabrication of section of pipeline or storage of spoil material. In all cases, the size of extra work spaces will be kept to the minimum required to safely conduct work.

42c. Typically, public roads will be used to gain access to the construction right-of-way. In areas where public roads are limited, and to minimize repeated travel on portions of the right-of-way, existing privately owned roads might be used to provide access to the construction right-of-way. If either public or privately owned roads are present, the Company may need to construct new access roads. Use of private access roads and construction of any new access roads would require obtaining landowner permission prior to use. No private or new access roads have been identified at this time.

42d. Traffic flows will temporarily increase during the construction period due to materials, equipment and laborer movements where roadways are crossed. Disruption to traffic patterns will be kept to a minimum and appropriate safety measures taken. Access to the right-of-way will be properly coordinated with county and city officials and affected property owners.

42e. Damage to surfaced roadways resulting from the crossing of construction equipment will be minimized by the use of protective planking or other appropriate material. Any road damages will be repaired to the satisfaction of the landowner or appropriate permitting authority.

43. **Criterion G. Impact on natural resources and features.**

43a. The impacts of the pipeline on water crossings, as noted in Finding 38, will be minimal as the water crossings will be bored or comply with MDNR requirements for crossing public lands and waters. The Company's restoration and other permit requirements will minimize impacts.

43b. At ditch crossings, grasses and other vegetation will be removed. However, any disrupted areas along banks will be promptly reseeded.43c. Wildlife species will be temporarily disrupted and may relocate to adjacent areas and reroute their travel in the area during construction of the pipeline.

43d. Immediately following construction, disturbed areas will be restored to original contours and reseeded. Once vegetation is reestablished, there should be no further disturbance.

43e. Because nearly all of the construction will take place within the existing right-of-way, the need to clear trees and brush will be limited to areas where vegetation has been allowed to grow on the right-of-way or where additional space is needed outside of the existing right-of-way. The Company will allow brush to grow on the right-of-way.

43f. Where clearing is required on the right-of-way, soil from tree or shrub roots will be retained on the right-of-way. Rock, roots and stumps that are uprooted will be properly disposed of.

43g. Excavated topsoil will be kept separated from subsoils by double ditching. This will be done to minimize mixing of topsoil and subsoil. Although double ditching will minimize mixing of excavated soils, some mixing may occur and tend to reduce nutrient balance along the narrow strip of land where excavation occurred. With good farming practices, the productivity losses should be negligible and temporary in nature. Full recovery should occur within a couple of growing seasons.

43h. Exposed soils are also subject to wind and water erosion. However, the potential for erosion is not excessive due to the low relief of the area crossed and the fact that the trench will be open only for a relatively short time. The Company will specify the special placement of berms or other specific erosion control measures and practices in areas where the potential for erosion exists.

43i. Compaction of soils will result from passage of heavy equipment. In areas where soil compaction has been detected, subsoiling will be performed as requested by landowners to relieve compaction. This may include chisel plowing or disk harrowing.

43j. Pipeline routing permit conditions specifically address soil compaction, erosion control and right-of-way restoration.

44. **Criterion H. The extent to which human or environmental effects are subject to mitigation by regulatory control and by application of the permit conditions contained in part 4415.0185 for pipeline right-of-way preparation, construction, cleanup and restoration practices.**

44a. Human and environmental impacts will occur as a result of pipeline construction. Many of the impacts associated with pipeline construction will cause only a temporary disturbance or disruption. Other impacts may be more significant in nature and duration. Many of the impacts will be

mitigated through compliance with regulatory control, strict adherence to the construction specifications and compliance with the pipeline routing permit conditions. Permits from other federal and state agencies and units of government are also designed to reduce or mitigate the impact of pipeline construction.

44b. Following completion of construction operations, the right-of-way and all premises on which construction activities were conducted will be cleaned up. This will include removal of debris, fence repair, removal of temporary road and ditch crossings, additional grading to correct for soil settling and seeding of the right-of-way as required by EQB permit conditions and other federal and state agency permits.

45. **Criterion I. Impact on cumulative potential effects of related or anticipated future pipeline construction.**

45a. There is no evidence in the record to indicate that cumulative adverse effects will occur that cannot be mitigated by compliance with the permitting requirements and conditions. Compliance with the permits, regulations and agreements, strict adherence to the construction specifications and a willingness to address concerns of the individual landowners will reduce the adverse effects of the project.

45b. The Company does not own any of the crude petroleum or natural gas liquids that it transports and the need for capacity expansion is driven by requests that the petroleum producers make upon the Company. For this reason, the Company cannot accurately predict the scope or timing of additional facility expansion phases. Any future projects will require review pursuant to the applicable statutes and rules.

46. **Criterion J. Impact on relevant policies, rules, and regulations of the state and federal agencies and local government land use laws including ordinances adopted under Minnesota Statutes, section 299J.05, relating to the location, design, construction, or operation of the proposed pipeline and associated facilities.**

46a. No evidence was introduced into the record indicating that the proposed pipeline would be inconsistent with any relevant policies, rules and regulations of any known state or federal agencies or local land use laws.

46b. Exhibit 1, Section 4415.0165 provides a list of the known permits that must be obtained. In addition to those permits, other permits may be required by appropriate permitting agencies. All appropriate permits will be acquired prior to construction in any specific area. The Company must comply with the terms and conditions of all necessary permits.

46c. Minnesota Rules part 4415.0200 and the pipeline routing permit provide a procedure for report of complaints concerning violation of the pipeline routing rule requirements and pipeline routing permit conditions.

46d. Minnesota Rules part 4415.0205 provides procedures for permit modification or suspension for violation of the terms and conditions of a pipeline routing permit or of Minnesota Rules parts 4415.0010 to 4415.0215.

Based on the foregoing Findings of Fact, the Board makes the following:

CONCLUSIONS

1. The Minnesota Environmental Quality Board has fulfilled all relevant procedural requirements of law or rule applicable to the consideration of an application for a partial exemption from pipeline route selection procedures and has the authority to grant or deny the partial exemption from pipeline route selection procedures and to issue a pipeline routing permit.

2. The Company has complied with the procedural requirements for a partial exemption from pipeline route selection procedures as set forth in Minnesota Rules part 4415.0035.

3. The EQB has established in Minnesota Rules part 4415.0040 a standard and criteria for a partial exemption from pipeline route selection procedures. The Board has considered the impact of the pipeline and associated facilities on each of the criteria and concludes as follows:

   A. The proposed pipeline and associated facilities will not have a significant impact on human settlement, existence and density of populated areas, existing and planned future land use, and management plans as nearly all 97 miles of the proposed pipeline will located in existing right-of-way.

   B. The impacts from construction of the pipeline and associated facilities on the natural environment, public and designated lands, including but not limited to natural areas, wildlife habitat, water, and recreational lands, are minor and of a temporary nature.

   C. The proposed pipeline and associated facilities will not adversely impact lands of historical, archaeological or cultural significance.

   D. The proposed pipeline and associated facilities will not have an adverse impact on economies within the route, including agricultural, commercial or industrial, forestry, recreational and mining operations.

E. Location of the proposed pipeline within existing right-of-way will minimize project cost and provide good access.

F. The proposed pipeline and associated facilities will not have a significant impact on natural resources and features along the proposed right-of-way.

G. The potential for significant human and environmental impacts will be mitigated through regulatory control by the various permitting agencies and the pipeline routing permit conditions required by Minnesota Rules part 4415.0195 for pipeline right-of-way preparation, construction, cleanup, and restoration practices, and other permit conditions.

H. There is no evidence in the record to indicate that any cumulative adverse effects will occur that cannot be mitigated by the appropriate permitting requirements and conditions.

I. There is no information in the record to indicate that the Company will not be in compliance with the relevant policies, rules and regulations of state and federal agencies and local government land use laws.

4. Pipeline construction impacts will be mitigated through compliance with the terms and conditions of the pipeline routing permit, existing federal regulations, permit requirements from other governmental units and agreements or permits between landowners or agencies and the Company. The Company's compliance with the permits, regulations and agreements and strict adherence to the construction specifications will reduce the adverse human and environmental impacts of the project so that they are not significant.

5. Based on its consideration of the criteria for partial exemption from pipeline route selection procedures and on the findings and record in this matter, the Board determines that the Company's proposed pipeline and associated facilities would not have a significant impact on humans or the environment.

6. Based on the findings and record in this matter, the Board determines that the pipeline and associated facilities should be granted a partial exemption from pipeline route selection procedures and be permitted with conditions.

7. Any Finding of Fact more properly considered a Conclusion, or any Conclusion more properly considered a Finding of Fact, is hereby expressly adopted as such.

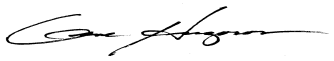
ORDER

Based on the Findings of Fact and Conclusions contained herein and the entire record of this proceeding:

The Minnesota Environmental Quality Board hereby grants Enbridge Energy Partners, Limited Partnership a partial exemption from the pipeline route selection procedures and issues a pipeline routing permit for construction of approximately 97 miles of 36-inch (outside diameter) steel pipe and associated facilities as generally shown in their application and environmental impact and restoration supplement and consistent with the above findings and conclusions.

Dated this 20th day of December, 2001

STATE OF MINNESOTA
ENVIRONMENTAL QUALITY BOARD



Gene Hugoson, Chair